PRESSURE JET CONVERSION
For OIL FIRED COOKERS

RAYBURN
Models : OF7/G7/ 200 - 209

INSTALLATION
Servicing & Commissioning

ISSUE No.3

DATE: 1st September 2007

Supplied by

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OFTEC Member

No. - 210955

THIS IS A NEW PRODUCT SO PLEASE READ THESE INSTRUCTIONS CAREFULLY, AND IMPLEMENT THEM, DO NOT TRY AND CUT CORNERS AS THIS COULD ENDANGER THE CONSUMER.

The Installation shall compliancy with :

BS 5410 : Part 1	**Oil Installations up to 45 kW**
The Building Regulations	**Part J England & Wales**
	Part F Section III Scotland
	Part L Northern Ireland
	Part J Republic of Ireland
BS 5449	**Forced circulation hot water central heating systems for domestic installations.**
BS 7671	**IEE Wiring Regulations 16th Edition.**

Installation of this Equipment must be carried out by a suitably **OFTEC** qualified/ trained personnel, That have also received training from Snughome in this type of conversion.

GENERAL INFORMATION

`This **Snughome Conversion Kit** for the Rayburn Cooker has been designed and manufactured by our engineers who have many year's experience in the Conversion field and incorporates many advances in technology and design. Currently it is ideally suited to the Conversion and Refurbishment Market, where the appliance can be easily modified as required. With the steady deterioration in the quality of Domestic Fuel Oil and in order to increase the overall market, this Pressure Jet conversion has been developed in conjunction with one of the top burner manufacturers.

Only use components supplied by SNUGHOME Ltd. as these have been specifically designed for this purpose. NO LIABILITY WILL BE ACCEPTED IF OTHER THAN SNUGHOME PARTS ARE FITTED. It has been designed to use most common fuel oils. All components are manufactured from well-proven materials and should give reliable service with improved economy. Noise has always been a problemwith pressure jets but in this case care has been taken to reduce this to a minimum.
The sale of the Conversion is also backed up with an experienced Technical Team that is always willing to give help and advice. This advice is also available on a Help Line. It is the Company's policy to give the Customer and Installer the best Product and Service available.

At present these instructions refer to vertically flued appliances and not low level discharge flues.

Technical Data :

This appliance is an oil fired pulse pressure jet 1stage. This should give a good performanceand high efficiency, and be more economic than previous vaporising burners.

The Fuel suitable for this burner are as follows:

1. Class C2 Kerosene (Otherwise known as 28sec Heating Fuel.)(1-2 mm^2/sec)
2. Low Sulphur Diesel – (32 Sec Fuel).)(2– 4.5mm^2/sec)
3. Red Diesel - (1.5 - 5.5 mm^2/sec)
4. Gas Oil (1.5 - 5.5 mm^2/sec)
5. Mazout (8 mm^2/sec)

(A n oil Pre-heater is fitted to these burners as standard and therefore suitable for the above fuels with only a pressure change to the burner)

Compliance with current legislation regarding Oil tanks and the siting thereof as directed by the Building Regulations Parts J & L.
The fitting of Safety Fire Valves as directed by the Building Regulations and by Snughome Ltd.

This Equipment must be earthed.

This equipment should be wired from a double pole switched fused spur having a minimum contact gap of 3mm, rated at 5 amps

This Equipment is only suitable for the appliance for which it has been designed..

Site Vetting; Before any decision to convert any appliance the site and the appliance **must** be inspected. Failure to do this will generally lead to a poor installation and a dissatisfied Customer. On arrival at the site have a look up at the chimneys and if possible check from a couple of directions. See if there is any soot stain down the sides of the chimney pots. Have a look at the surroundings of the chimney particularly angled close roofs, over hanging branches and trees, geographical position

(i.e. down draught).

COOKER POSITION -- Although this cooker can be turned off and on as required it should be considered as normally constant running & will get hot. Therefore it should be mounted on a solid non-combustible base and a minimum clearance of 100 mm should be left on

either side of the appliance when combustible materials are placed close to it, for example kitchen units. Any other surfaces adjacent to the cookershould be of non-combustible materials.

This conversion does not need free area around the sides of the cooker for air supply as it receives combustion air through the bottom of the outer door of the cooker..

Installation of this Equipment must be carried out by suitably **OFTEC** qualified/ trained personnel, That have also received training from Snughome in this type of conversion.

1. This is a fan assisted burner and runs at 32,000 Btu/hr 9.4 Kw maximum when burning, the air requirements for this must be taken into account when determining the necessary ventilation.

2. Extractor fans when fitted should be positioned as far away from the flue as possible and should have a sufficient dedicated air supply. To undertake a test, the oil fired appliance should be set in operation at maximum setting and the doors and windows closed. The extractor fan should then be run at its maximum setting. The oil fired heating appliance should be observed to operate satisfactorily both before and after the fan is switched on.
2. It is preferable that the air supply for the extractor fan should be located where it can serve the fan without the air stream passing close to the oil fired appliance.
3. As this appliance draws its air through the outer fire box door this must not be obstructed in any way

Oil fired appliances MUST NOT draw combustion air from a garage.

FLUES & CHIMNEY TERMINATION

Building Regulations “J”. L1 & L2
The new approved documents J, and the “Competent Persons legislation both came into force on

All installations, chimneys, flue’s , building work etc, must comply with the new legislation.
Suitable Flues and liners should be used in accordance with Building Regulations
Document J pages 18 - 21, and page 52
An Anti Down Draught Cowl (that conforms to British Standards) **SHOULD BE FITTED.**
Possibly the best one on the market today is the **O.H. COWL**. Down draught will not go away it has to be eliminated.

If the chimney is cooled by lack of insulation the difference in weight will also decrease the natural draught. The cooling of the chimney can vary a lot, amongst other things depending on the wind

A bad chimney can create the following effects:

1. **Pressure fluctuations at start up that create overpressure in the combustion chamber and possibly exhaust gases and soot in the room and top oven.**
2. **A smoky flame during the time necessary to heat the chimney until the natural draught has stabilised.**
3. **Deterioration of the chimney due to condensation af the water vapour into water and acid components.**
4. **Noise and heat transferring to adjacent rooms.**
5. **Soot deposits near the chimney and poor distribution of the exhaust gases due to low velocity (too cool gases in too large a chimney area.**

FOR SPECIALIST HELP ON CHIMNEYS OR FLUE PROBLEMS CONTACT THE O.H. HELPLINE. GOOD SOUND TECHNICAL ADVICE ON CHIMNEY'S AND FLUES CAN ALSO BE OBTAINED FROM YOUR N.A.C.S. CHIMNEY-SWEEPING TECHNICIAN

OIL STORAGE & SUPPLY (See BS5410 : Part 1)

For this appliance the oil tank can be mounted at ground level. Also it can be fitted with the lowest oil level in the tank 1.3m below the level of the oil pump, over 1.3m a circulator or lift pump is required.The mild steel oil storage tank should be manufactured to BS 799 Part 5. Plastic oil tanks are covered by OFTEC standard OFST100. The minimum recommended oil tank size is 1400 litres (300 gallons). Codes of practice governing installation are covered by BS5410 Part 1.
Should a lift pump be required with the new building regulations and current trends in health and safety it is recommended that the oil lifter is mounted external to the building.

2.. The pipe line MUST be of a suitable size (10 mm diameter is usually sufficient) to ensure that maximum flow can be achieved (any other appliance should be accounted for).

3. A manual isolator valve and oil filter must be fitted directly on the outlet from the oil tank.

4- 10 micron oil filter is fitted in control assembly to prevent small particles entering the burner assembly.

Fire valves should also be fitted, one according to the instructions to protect the appliance **and a second mounted external to the building to comply with the new Building Regulations**.

It is recommended that a manual shut off valve be fitted in the same room as the appliance.

On page , a diagram of a layout is shown which would comply with the new regulations and provide a suitable oil supply to the appliance.

TOOLS REQUIRED - -

1. **Normal fitters tools for dismantling and assembling an Aga or Rayburn.**
2. **Grinder or powered Sabre saw for modifying the front casting.**
3. **Drills for broken off bolts, ideally 1/4 & 5/16 Whitworth**

This guide is to help you install the Pressure Jet oil burner into an existing Rayburn 200 series cooker. It is ONLY designed to fit the models originally made for OIL or GAS operation and is NOT SUITABLE for the 4 door solid fuel variety.

It may be fitted into the OF7 Regent - please ask for advice.

Preparation

Tools required
Vacuum , hand brush (paint brush) , bottle brush etc
Sabre saw, hacksaws (metal blade)
Electric drill with drill bits to tap to 6mm (5.5mm bit)
Metal file
Fireclay – 1 kilo tub. Tube of silicone & applicator gun .
Oil pipe jointing compound.
Pipe bender – mini bender to bend 6/8/10mm ideal

Method

Remove flue pipe connections, so you can access the x frame situated between the flue "funnel" and the cast iron diverter. This is not used.
Remove the cast iron hob –hotplate used to boil pans on – and the sealing rope Underneath.
Remove the cast iron internal box that sits above the burner, the slag wool insulation inside it.
Remove the burner, its supply pipes and the cast iron base plate it sits on .This assumes you have already disconnected the oil / gas supply to the cooker(* or have had it professionally disconnected by an approved engineer OFTEC / CORGI registered)
Remove the pipe that enters the cooker through the side panel.
You may leave any oil stop valve or KBB fire valve in place and any sensor inside the cooker may be simply moved out of the way.

Vacuum / brush clean carefully ALL passages (remove) – above the oven and the chimney area. Ensure that the chimney is clean – get swept if necessary- and checked (see our details in this document) for soundness.

Before cutting the cooker take the burner assembly and try fitting it into the cooker because in some cases it will fit without cutting the frame -- **only cut if necessary**.
To do this, take your hacksaw, sabre saw or similar and cut through the cast iron frame as close as possible to the edge of the firebox frame. This is to allow the fan motor to enter the cooker.
See photo below. I have found that a double handed hacksaw is good for this job but a sabre saw is better if more costly in blades!

Battery powered sabre saw cutting cast iron frame

Frame cut through, ready to break off. No damage to front casting!

Once the frame is cut through – careful not to saw the enamel front- unscrew the 2 bolts located under the frame. They can easily be felt under where you have been sawing. They unscrew easily with a screwdriver about 8mm across the blade. Gently tap the frame on the inside end (both sides) and I have found it snaps easily and cleanly .
Vacuum out the area underneath to stop swarf from being sucked into the burner.

Cutout removed

Drilling the mounting stud holes.

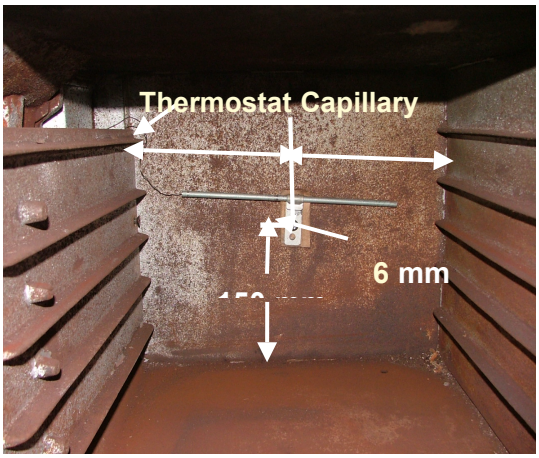
Fitting the mounting plate

When the burner is positioned in the firebox, 2 x 6 mm studs locate it. The Burner mounting Frame, (as seen in the parts list), is used as a template. Using the frame allow 5 mm clearance above the plate. Using a felt tip or similar mark , the two mounting holes are 9 and 3 o'clock for drilling.

Drill to tap to 6mm

(studs supplied)

Once the holes are drilled and tapped 6 mm , screw in the studs supplied so that they just pass through the frame.

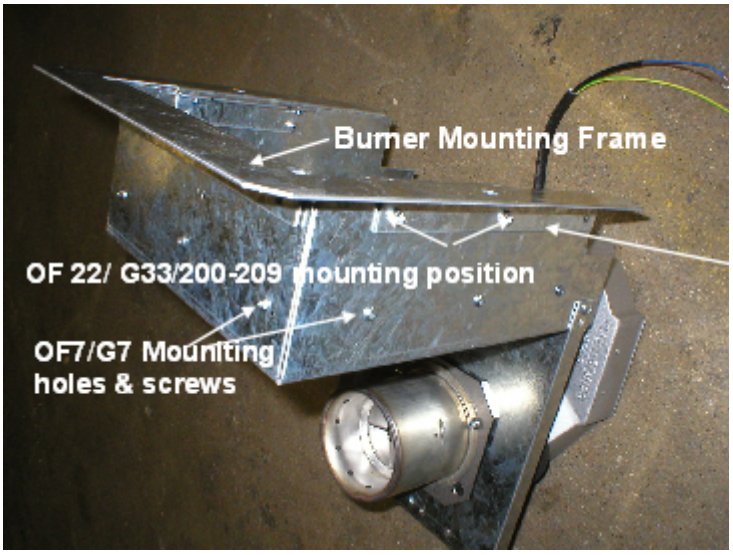


Drilling the Oven to take the heat sensor

You may now drill the hole to take the oven sensor. It should be drilled at a 45 degree angle about 20 mm in from the frame up into the oven. The hole will come out inside the oven, behind the side wall (which can be un-screwed if you wish – 2 ¼" Whitworth bolts hold the side wall in place)
Don't drill too close to the frame as it makes removing the sensor more difficult .

Drilling the Oven Rear Wall to mount the sensor

See diagram . Drill and tap a 6 mm hole . Loosely fit the clamp, remembering to fit the small insulation pad behind the clamp.

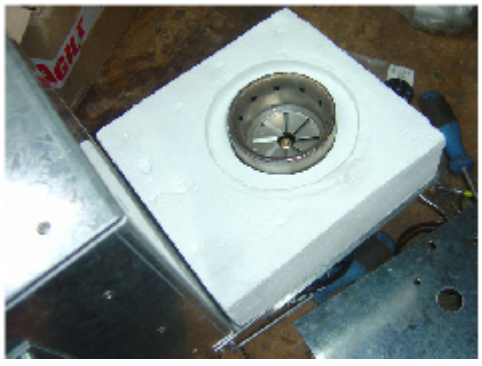


Now fit the burner frame to the burner assembly

The same Frame is used for both the OF7 & OF22 burners, but the positioning is different (See photo)

Front Edge of Frame
Must point forwards
toward the blast tube

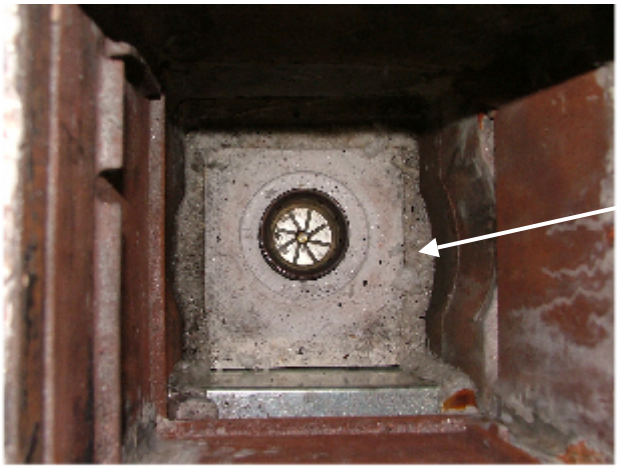
Preparing the Burner
Take a tube of silicone and apply a thick bead all around the inner face of the burner frame ,
Take the 35mm x 725 mm rope seal part no 1 and glue into position. Making sure that the ends both finish equal, just below the burner housing.



FITTING THE CERAMICS

Take the block marked No 2 and fit over the blast tube and slide tightly down onto the base. It may be necessary to gently ease the blast tube hole and the sides to allow the block to slide into position.

See photo

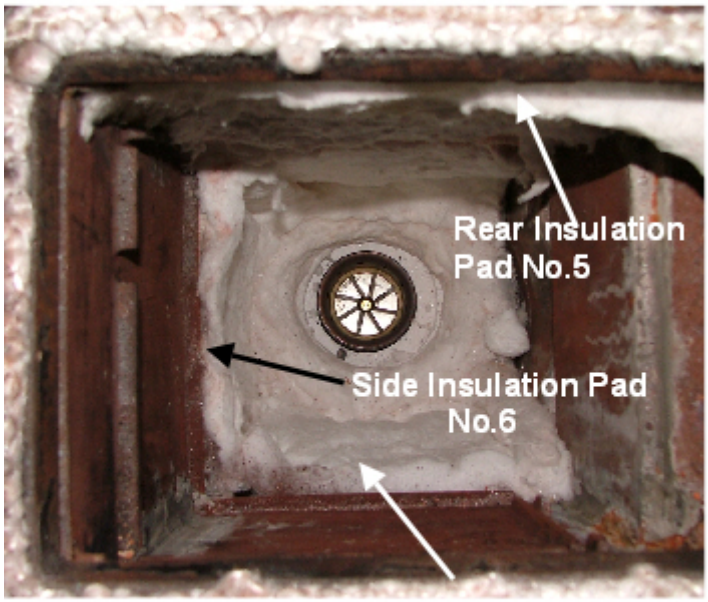


Now fit Part 3 the 50 mm x Rope Seal around the ceramic block to seal the air. It should project up the front edges as in photo. Ensure that it is pressed tightly into position

Then take part No.4 the blanket with a large hole in the centre and fit into

position as in photo. The 2 equal side face the oven and outer wall of the cooker. see photo. Then press

the blanket outwards to fill all the gaps but try and keep the hole equal around the blast tube. The hole size can be larger to take up the fitting

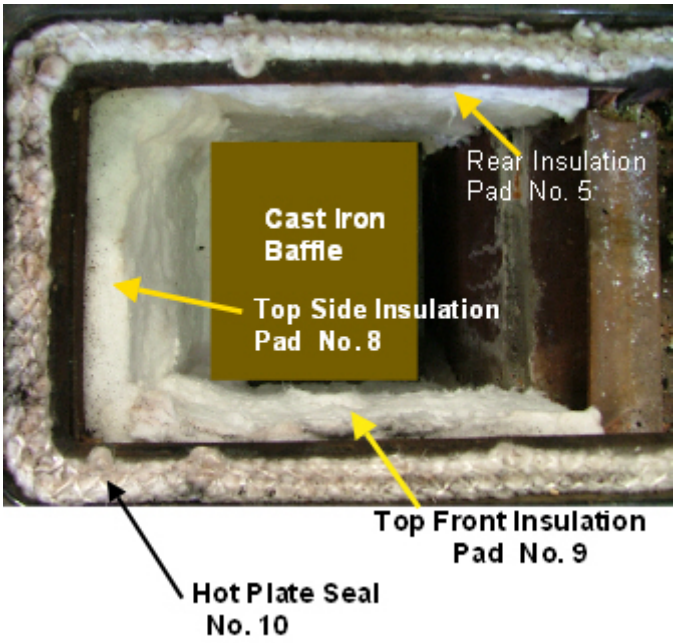


Position the rear insulation pad No. 5 in position as shown in photo and press in tightly coming down onto pad No.4 sealing the back.

Now fit the side pad No. 6 as shown and again press tightly into position. Making sure the rear and the front corners are sealed.

Now fit the front pad No. 7 as shown and again press tightly into position forcing it into the corners.

The finished item should appear as shown.



Fit the cast iron baffle into position with the front markings facing forward.

Then place the top side insulation pad part No. 8 into position, pressing it in tightly.

Now press the Top Front Insulation Pad Part No. 9 tightly into position. Press the top edges of the blankets back as far as possible so as not to restrict the air passage-ways under the hot plate.

Now glue the Hot Plate 15 mm seal part No. 10 into position with the tales at the cool end of the hot plate, ensuring that it seals correctly.

Glue the short 15 mm rope seal part No. 11 to the underside ridge on the hot plate. Place the hot plate into position and press down firmly.

Drill a hole 15 mm into the top of the oven under the flue. Fit the 15-22 mm adaptor into the 15 mm hole and seal, then put the 22 x 300 mm pipe into the adaptor, allowing the pipe to go up the flue.

Fit the flue adaptor to the top of the flue box, and seal into position, using fire clay. Then place the flue cover into position and seal.

Then fit the flue to the cooker.

Connecting the oil pipe.

Hold the end of the 6 mm bundy tube and gently pull up and across to connect to the oil pump, using jointing compound and tightly securely. Note – because the pump is flexibly mounted make sure the joint is TIGHT and also that the bundy tube doesn't reverberate against the fan housing which would create noise. Trim and bend the other end of the pipe and make into the oil filter using the fitting supplied.

Wiring. Connect the terminal block to the feed flex and prepare for switching on.

Bleeding the oil pipe. There is a small bleed fitting on the pump- see photo-

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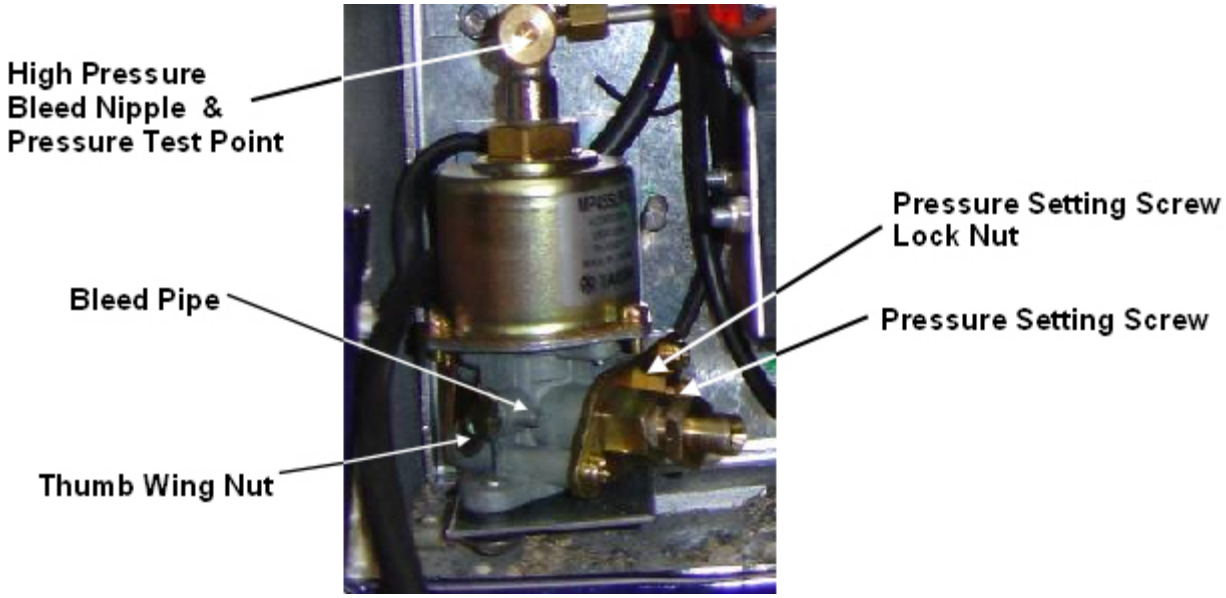


50 mm to left of oil pipe connection with thumb nut. Connect 1/8* diameter bleed tube supplied and feed into a jar. Connect oil pressure test gauge by removing knurled nut (with recessed Allen key head at top of pump) .Bleed oil through from line. Its important to bleed both sides of the pump as air can get trapped in the pump and create noise.
Once bled, shut off thumb nut.

Firing the burner.

Advise the client you are about to fire the burner and ensure ventilation is adequate!

Switch on the burner. **It will take up to 4 minutes before the burner will fie from switching on,** this is the time the pre-heater takes to warm up and send power to the control box.

It may go to LOCK OUT initially as the oil pump is full of air. Bleed until oil is constant, note the lock out button stays RED for around 2 minutes after it locks ot. Note also that the burner is TIMED and will NOT FIRE initially until it has done its “3 minutes off cycle” .You can speed up the off period initially by switching the power off to the burner, then on again – this fools the burner

into an ON period!
Set pressure to 90 psi – subject to fuel type you are using.

KEROSENE CLASS C2, DIESEL, RED DIESEL, Bio- Diesel, MAZOOT -- 100psi
You are looking for a short blueish / yellow flame about 2-3” out of the blast tube, steady not to long or sooty.

Burner air adjustment. This is obtained by moving the lever
Once you are happy with the flame, fit baffle

Current legislation insists that burners are set up using Combustion Testing Equipment.
In order to obtain the best performance from the burner and cooker these units must also be set up using testing equipment.
As there is no ideal testing point in or on the cooker it is necessary to do this in the flue above the

Flue Box. Therefore drill a hole in the flue suitable for the test probe. Before firing the burner to test the combustion put a plug in the vent hole in the top oven. This is to ensure that there is no flue gas dilution due to air getting in, as this would upset any readings and give false

results. Which could lead to bad combustion as the cooker gets hot.
Start the burner.. After the burner has fired allow approximately 10 minutes for it to settle down. Then check the combustion. It should approximately read as follows:

COLD COMBUSTION FIGURES
With the cover plate in position
Co --- -- -- -- 30 – 100 ppm
CO_2 -- -- -- -- - 8.8 – 9.0% This will change when hot
Co/CO_2 -- -- -- 0.0003 – 0.0008

It may be necessary to adjust the combustion to these figures by setting the air lever as detailed above.

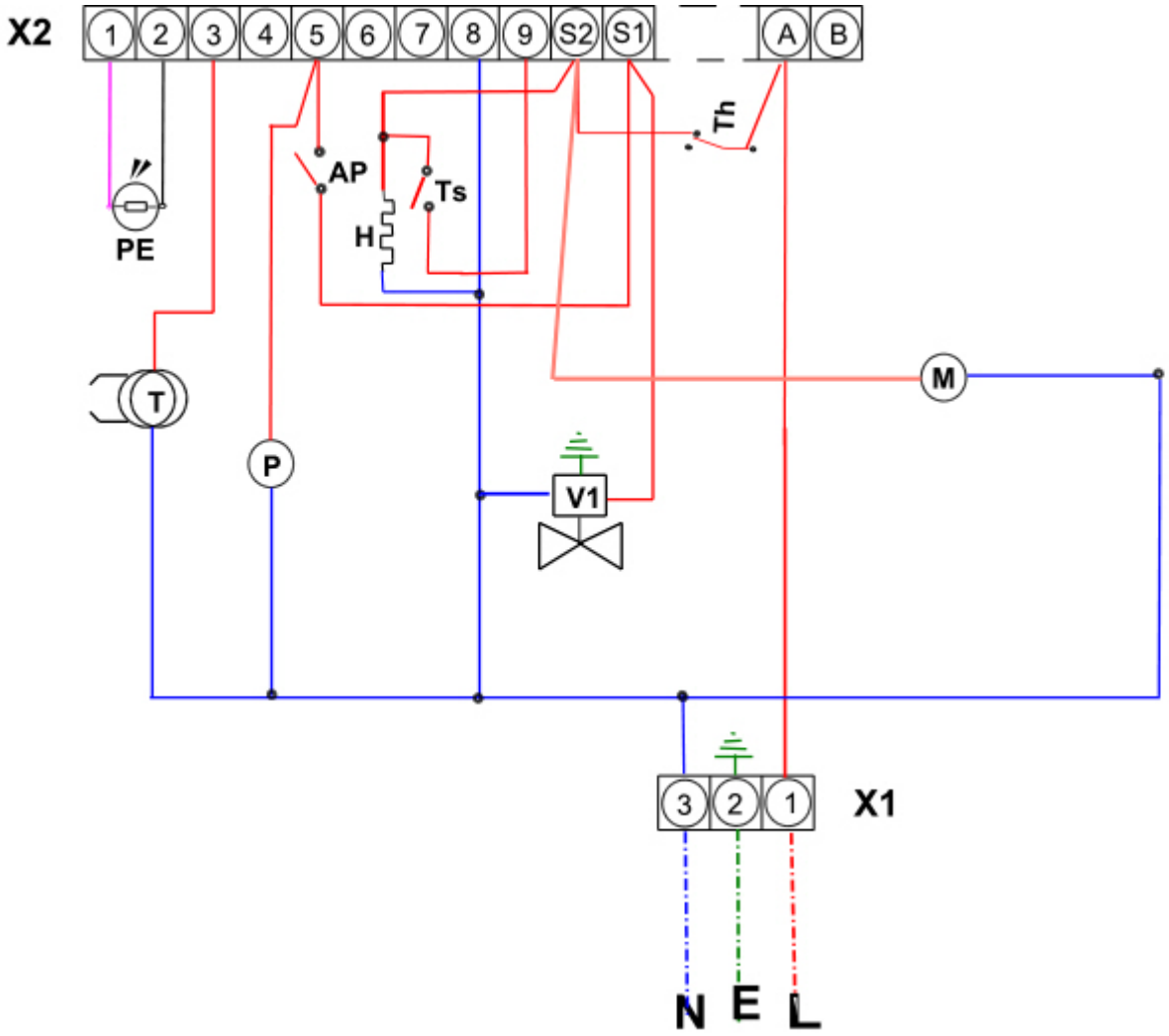
When the cooker is hot and up to temperature this should give:
HOT COMBUSTION FIGURES
With the cover plate in position
Co --- -- -- -- 30 – 100 ppm
Co/CO_2 -- -- -- 0.0003 – 0.0008
If not it may be necessary to adjust accordingly.

After Setting the combustion REMEMBER TO REMOVE THE PLUG FROM THE OVEN VENT or you will get condensation coming from the oven, also ensure that the combustion test hole in the flue is closed.

Remember to leave the customer with the test results.

Servicing.
The annual service consists of the following

(a) Remove burner and visually check baffles/ ceramics. Repair ceramics if required with ceramic material (we can supply) ,replace any too badly damaged.
(b) Clean out burner blast area, removing any debris that may have fallen in.
(c) Remove nozzle and replace with new. Check and replace blast tube if any cracking at end .
(d) Remove fan unit and make sure the fan is clean – removing any build up on the blades and around the air intake.

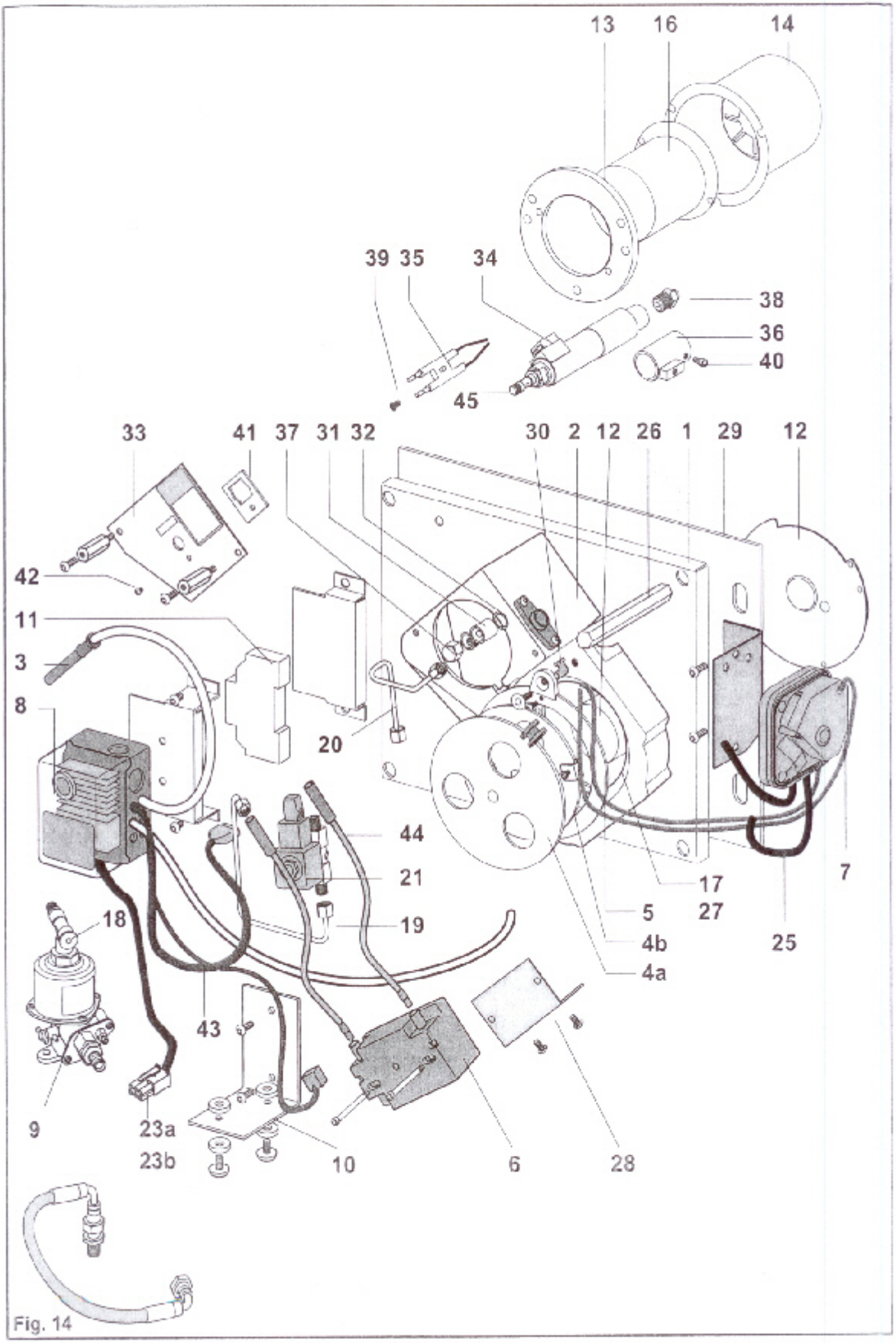


Key to Diagram

X1	Control Wiring Base
X2	3 Wire Connector
PE	Photocell
P	Oil Pump
T	Ignition Transformer
V1	Oil Solenoid Valve
AP	Air Pressure Switch
M	Fan Motor
H	Oil Pre-heater
Ts	Pre-heater Temperature Switch
Th	Thermostat

OF7 Specification Wiring Diagram

28/03/06 G.A.J.Lake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23a
23b
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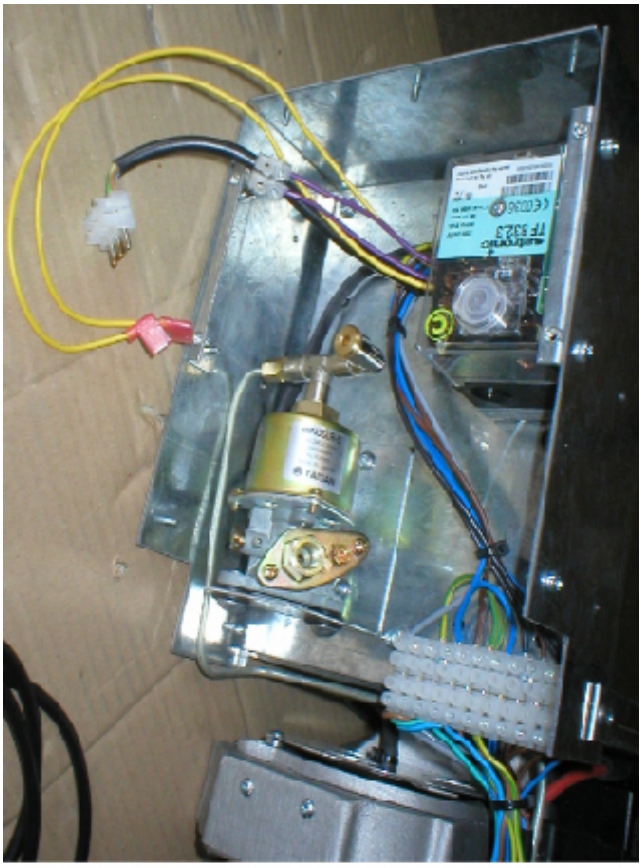
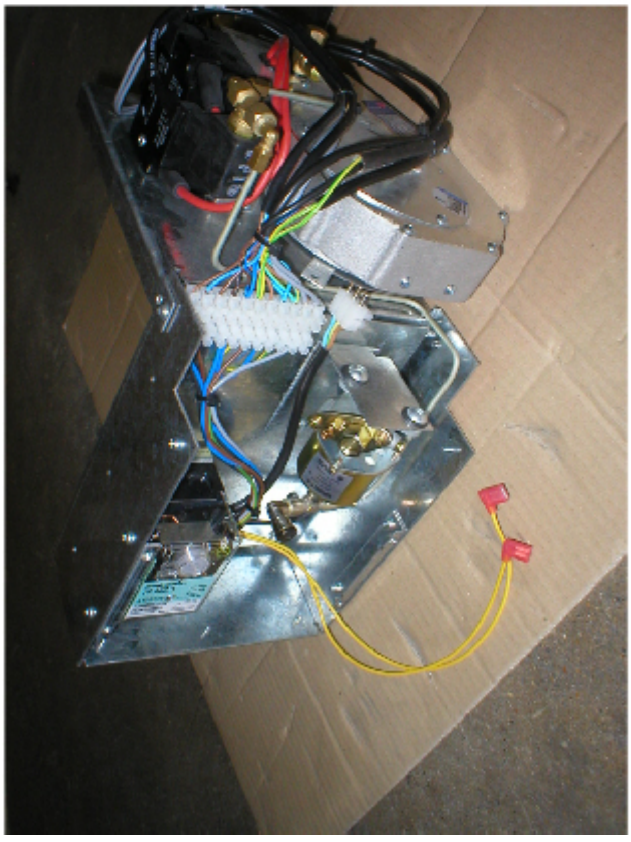
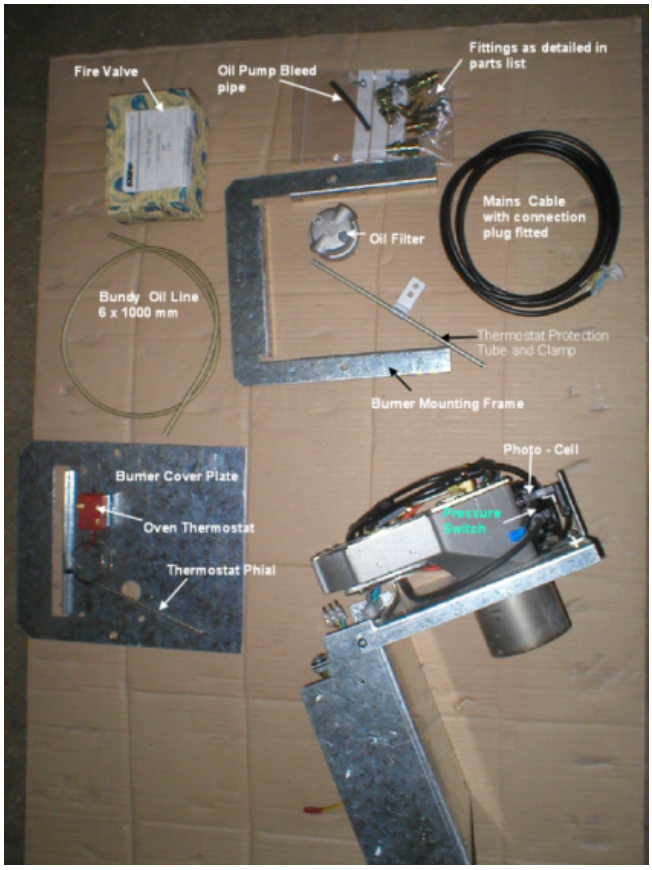
Fig. 14

RAYBURN OF7 CONVERSION

ITEM No.	SPARE PART NUMBER	DESCRIPTION	RE
1	X10-0106	Component chassis plate	
2	E80-005-002-000-00	Fanhouse	
3	S01-MZ770S	MZ770S Photocell	
4a	E80-008-003-000-02	Air control plate - Outer	
4b	E80-008-003-000-03	Air control plate - Inner	
5	E80-001-004-001-02	Air inlet flange New type	
6	D01-052F0036	EBI Ignitor unit 2 pole 230v Top Entry	
7	D02-LGW3-A1	LGW 3 A1 Pressure Switch	
8	S01-TF832.3	TF832.3 Control box	
9	T01-MP45SLR-S	MP45SLR-S Taisan solenoid pump 230v	
10	E80-002-002-000-06	Pump mounting bracket	
11			
12	E80-100-104-025-00	Motor fan unit G2S097-DB03-01	
13	X10-0105	Blast tube attachment flange	
14	E80-004-001-004-00	Blast tube ET 10-5-16-8 80mm	
15			
16	E80-008-001-000-00	Blast tube air guide	
17	E80-500-002-000-00	Air inlet gasket	
18	E80-300-999-000-00	1/8" Bleed Nipple	
19		Pump to solenoid oil line	
20		Solenoid to Banjo oil pipe	
21	D03-0008	Solenoid valve body	
21b	D03-0002	Solenoid coil 230v	
22			
23a	E80-302-006-212-00	12 pin terminal strip Male (cut to suit)	
23b	E80-302-006-312-00	12 pin terminal strip Female (cut to suit)	
24			
25	E80-301-801-401-01	Air pressure pipe (length 1m cut to suit)	
26			
27			
28			
29	X10-0109	Mounting Edge plate	
30	E80-301-101-302-00	1/8" m x 4mm Plastic elbow	
31	E80-300-105-201-01	1/8" BSP x 4mm compression banjo (outer only)	
32	E80-406-402-003-00	Banjo washer	
33	X10-0104	Nozzle backplate	
34	D01-030N4101	FPHB-LE pre-heater 70W 110-230v	
35	E80-200-300-000-01	Electrode block design 2	
36	E80-002-011-000-01	Electrode holder design 2	
37	E80-007-005-000-00	Banjo cap nut	
38	D01-030H6102	Danfoss nozzle 0.30 x 60 H	





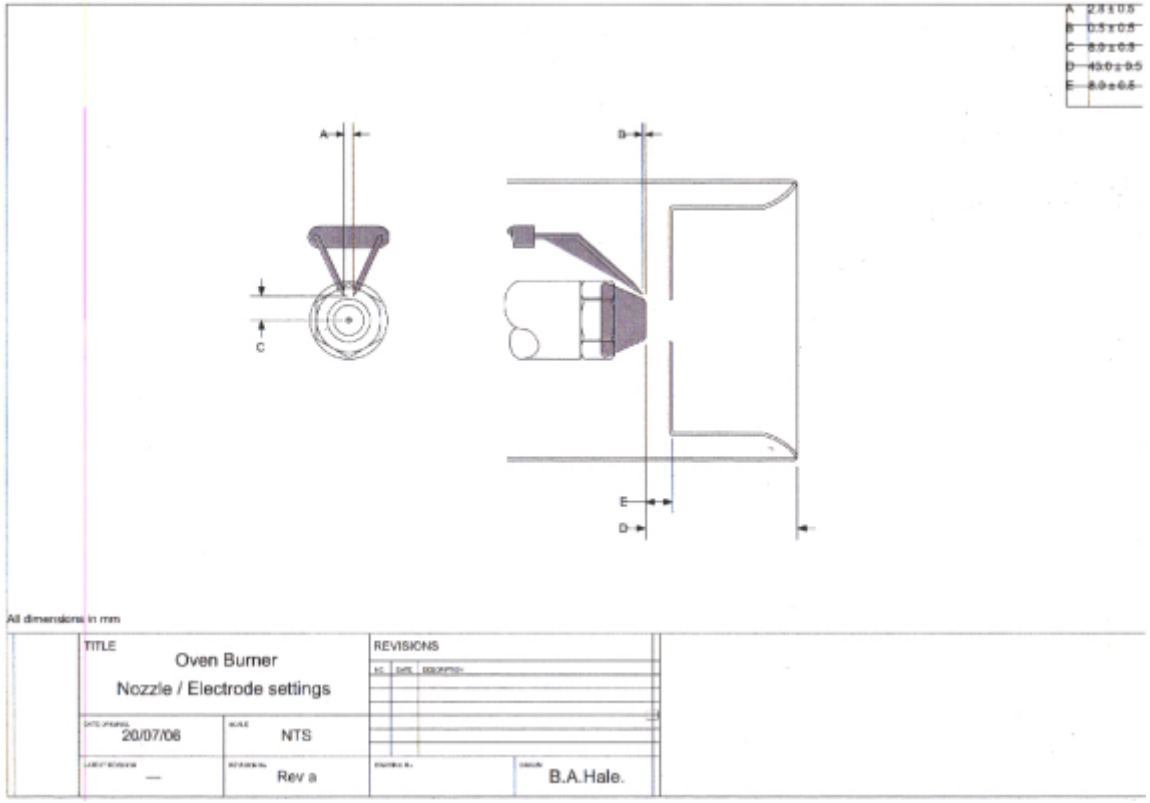


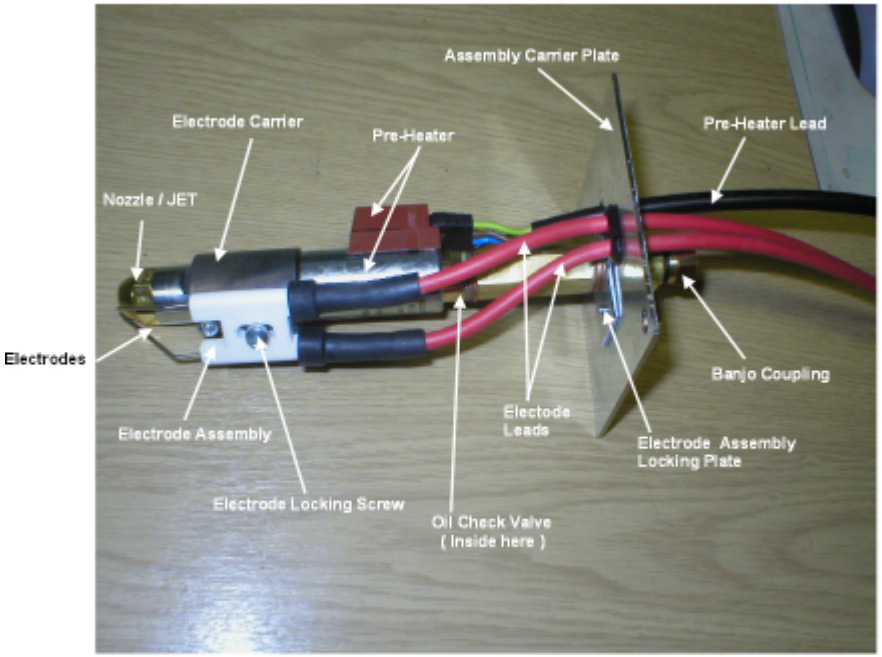
DATE: 08/08/06

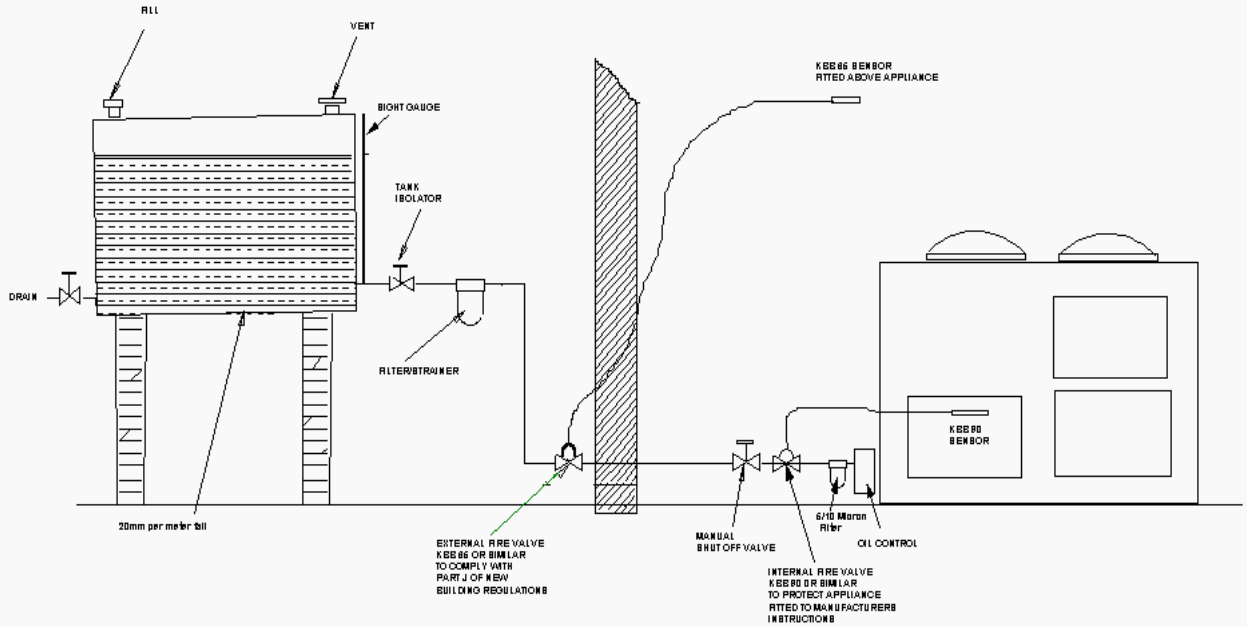
ACCESSORY PARTS LIST
RAYBURN OF7 CONVERSION.

AK-003

PART NUMBER	COMPONENT DESCRIPTION	QTY
X01-0109	1/8" BSPT x 6mm Compression Elbow	1
E90-300-801-306-00 1m	6mm Bundy tube x 1000mm	1
E90-303-101-101-01	1/4" BSP Filter	1
X01-807-198	1/4" BSP x 6mm compression coupling.	1
X01-739-275	1/4" BSP x 10mm compresion coupling	3
X03-SP-06-0-0640	6mm x 40mm Studs	2
X05-06-S-W	6mm Wings Nuts	2
X04-SP-0612	6mm Flat washers	2
	1.0mm 3 core cable x 3m long + female 3pin plug	1
E03-TFV-90-30	TFV FIRE VALVE x 3m	1
E90-301-801-401-00	6mm x 80mm bleed tube.	1
E90-300-801-306-00 .25m	6mm x 250mm bundy	1
X01-277-525	Straight edge clip	1
X03-SP-01-1-0610	M6 x 10 Pozi	1


A
B
C
D
E
D
All dimensions in mm
TITLE
Oven Burner
Nozzle / Electrode settings
REVISIONS
20/07/06
NTS
—
Rev a
B.A.Hale.


Assembly Carrier Plate
Electrode Carrier
Pre-Heater
Pre-Heater Lead
Nozzle / JET
Electrodes
Banjo Coupling
Electode Leads
Electrode Assembly
Electrode Assembly Locking Plate
Electrode Locking Screw
Oil Check Valve (Inside here)



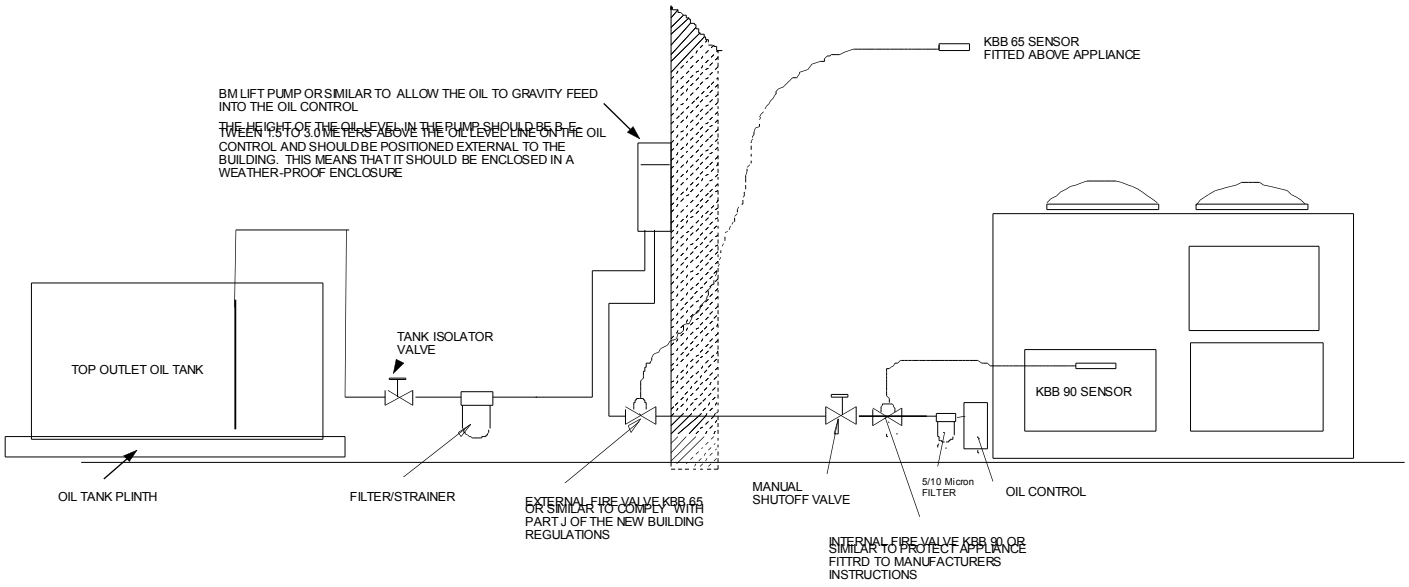
FILTER:- A strainer/filter should be fitted to the tank. An additional 5/10 micron filter (supplied) is fitted just before the oil control on the appliance.

FIRE VALVES:- In order to comply with current legislation a fire valve (KBB65 or similar Type (set at 65*C) available from Oilwarm but not supplied), must be fitted. at the point where the fuel line enters the property, with its sensor inside the property, to isolate the fuel in the event of a property fire. Normally this would be sited above the appliance not at floor level.

A second fire valve (KBB90 or similar type (set at 90*C), supplied with the kit, is fitted next to the oil control with its sensor located inside the burner housing (ashpit area), and fitted in accordance with the Oilwarm instructions supplied.

KBB 90's are used to protect the appliance and MUST NOT be used to protect the property, this is carried out by the KBB65's.

DIAGRAM OF OIL LINE REQUIREMENTS IF A TOP OUTLET OIL TANK IS USED.


KBB 65 SENSOR
FITTED ABOVE APPLIANCE
BM LIFT PUMP OR SIMILAR TO ALLOW THE OIL TO GRAVITY FEED
INTO THE OIL CONTROL
THE HEIGHT OF THE OIL LEVEL IN THE PUMP SHOULD BE B E-
TWEEN 1.5 TO 3.0 METERS ABOVE THE OIL LEVEL LINE ON THE OIL
CONTROL AND SHOULD BE POSITIONED EXTERNAL TO THE
BUILDING. THIS MEANS THAT IT SHOULD BE ENCLOSED IN A
WEATHER-PROOF ENCLOSURE
TOP OUTLET OIL TANK
TANK ISOLATOR
VALVE
KBB 90 SENSOR
OIL TANK PLINTH
FILTER/STRAINER
EXTERNAL FIRE VALVE KBB 65
OR SIMILAR TO COMPLY WITH
PART J OF THE NEW BUILDING
REGULATIONS
MANUAL
SHUTOFF VALVE
5/10 Micron
FILTER
OIL CONTROL
INTERNAL FIRE VALVE KBB 90 OR
SIMILAR TO PROTECT APPLIANCE
FITTRD TO MANUFACTURERS
INSTRUCTIONS

FILTER:- A strainer/filter should be fitted to the tank. An additional 5/10 micron filter (supplied with kit) is fitted just be fore the oil control on the appliance.

FIRE VALVES:- In order to comply with current legislation, a fire valve KBB 65 0r simila r Type (available from OILWARM but not supplied as part of the kit) , **must be fitted at the point where the fuel line enters the property.** It's sensor being inside the property to isolate the fuel in the event of a property fire. Normally this would be si tuated above the appliance not at floor level.

Under no circumstances should a **KBB/E** be used on this type of installation as it is self re-setting, and can allow oil to run into a hot burner.

A second fire valve, KBB 90 or similar type (set at 90 °C) supplied with the kit, is fitted next to the oil control with it's sensor located inside the burner housing